

## REMARKS

This is intended as a full and complete response to the Office Action dated September 20, 2006, having a shortened statutory period for response set to expire on December 20, 2006. Claims 1-8 have been examined. The Examiner rejected claims 1-8 under 35 U.S.C. § 101 because the claimed invention lacks patentable utility. The Examiner rejected claims 1-8 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. The Examiner rejected claims 1-8 under 35 U.S.C. § 102(b) as being anticipated by Shin ("A novel optical signal-to-noise ratio monitoring technique for WDM networks," Shin et al.; Optical Fiber Communication Conference, 2000; Volume 2, 7-10 March 2000, Pages:182-184).

### *Claim Rejections – 35 USC § 101*

The Examiner rejected claims 1-8 under 35 U.S.C. § 101 because the claimed invention lacks patentable utility. According to the Examiner, the claims are drawn to a method for computing and/or calculating values. Further, the Examiner states that simply computing and/or calculating values, without using the values to produce a useful result is not a practical application. In response, Applicants have amended the claims to indicate that the calculated optical signal noise ratio is used to determine the performance of the network as set forth in the application. Therefore, Applicants respectfully request that the § 101 rejection of the claims be removed and allowance of the same.

### *Claim Rejections Under 35 U.S.C. § 112*

The Examiner rejected claims 1-8 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. According to the Examiner, the claims are drawn to a method for computing and/or calculating values without using the values. In response, Applicants have amended the claims to indicate that the calculated optical signal noise ratio is used to determine the performance of the network as set forth in the application. Therefore, Applicants respectfully request that the § 112 rejection of the claims be removed and allowance of the same.

***Claim Rejections Under 35 U.S.C. § 102(b)***

The Examiner rejected claims 1 and 3 under 35 U.S.C. § 102(b) as being anticipated by Shin. In response, Applicants have amended claim 3. Additionally, Applicants respectfully traverse the rejection of claim 1.

According to MPEP 213, to anticipate a claim, the reference must teach every element of the claim. Claim 1 includes the limitations of (i) selecting a frequency range based on network traffic protocol and transmission rate, (ii) sampling a plurality of points continuously at a frequency, (iii) determining an average power of the plurality of points, (iv) generating a spectrum in frequency domain by utilizing a Fast Fourier Transform, (v) generating a noise spectrum density from the spectrum and the frequency range and (vi) calculating an optical signal noise ratio from the noise spectrum density and the average sampled points, wherein the optical signal noise ratio is used to determine the performance of the network. Shin does not disclose these limitations. Rather, Shin merely discloses a method for optical signal noise ratio monitoring in a network. The method of Shin includes tapping a small portion of a multiplexed signal and then splitting the signal to a first photodetector configured to measure the total power received and a second photodetector configured to measure the noise power. The noise power is determined by using a digital signal processing (DSP) board that processes digitally converted data using Fast Fourier Transform. The method further includes estimating the optical signal noise ratio by using the total power measured by the first photodetector and the noise powered measured by the second photodetector. Among other things, Shin does not disclose selecting a frequency range based on network traffic protocol and transmission rate, sampling a plurality of points continuously at a frequency, determining an average power of the plurality of points, as recited in claim 1.

As amended, claim 3 includes the limitations of (i) calculating a noise spectrum density from a spectrum and a frequency range based on network traffic protocol and transmission rate and (ii) calculating an optical signal noise ratio (OSNR) from the noise spectrum density and a predetermined calibration data, wherein the optical signal noise ratio is used to ascertain the performance of the network. For reasons similar to those set forth above, Shin does not disclose these limitations.

As the foregoing illustrates, Shin fails to teach or suggest all the limitations of claims 1 and 3. This failure precludes Shin from anticipating claims 1 and 3. Therefore, Applicants

respectfully request the 102(b) rejection of claims 1 and 3 be removed and allowance of the same. Additionally, since claim 2 depends from claim 1 and claims 4-6 and 8 depend from claim 35, these claims are allowable for at least the same reasons as claims 1 and 3.

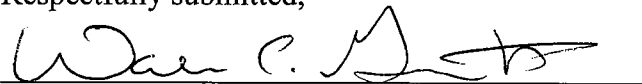
### *New Claim*

New claim 15 was added to claim additional aspects of the present invention. Applicants submit that no new matter has been added in new claim 15. The new claim recites the steps of tapping a portion of a signal from the channel, sampling a plurality of points continuously at a frequency, determining an average power of the plurality of points, calculating a noise power density of the plurality of points, wherein the noise power density is calculated by utilizing a spectrum in a frequency domain and a selected frequency range based on traffic protocol and transmission rate and determining an optical signal noise ratio from the noise spectrum density and the average sampled points, wherein the optical signal noise ratio is used to ascertain the performance of the multiplexer. Applicants believe that Shin does not disclose calculating a noise power density of the plurality of points, wherein the noise power density is calculated by utilizing a spectrum in a frequency domain and a selected frequency range based on traffic protocol and transmission rate, among other things. Therefore, Applicants believe that new claim 15 is in condition for allowance and respectfully request the same.

### *Conclusion*

Having addressed all issues set out in the office action, Applicants respectfully submit that the case is in condition for allowance. If the Examiner has any questions, please contact the Applicants' undersigned representative at the number provided below.

Respectfully submitted,



Walter C. Grollitsch

Registration No. 48,678

PATTERSON & SHERIDAN, L.L.P.

3040 Post Oak Blvd. Suite 1500

Houston, TX 77056

Telephone: (713) 623-4844

Facsimile: (713) 623-4846

Attorney for Applicants